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HYBRID ELEMENT AND MANUFACTURING METHOD THEREOF

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[There are no amendments to this patent.]

Claims

1. A type of hybrid element characterized by the following facts:

the hybrid element has bump coupling electrodes, which electrically connect a pair of semiconductor chips set facing each other;

the base portion of the aforementioned bump coupling electrodes connected to the aforementioned pair of semiconductor chips is made of indium, and the middle portion is made of an alloy of indium and gallium;

in addition, the peripheral portions of the aforementioned pair of semiconductor chips are mechanically bonded to each other by means of an adhesive.

2. A manufacturing method of the hybrid element characterized by the following facts: bump electrodes made of indium are formed on a pair of semiconductor chips; a smooth substrate with a gallium film formed thereon is arranged facing is brought into contact with at least one of the aforementioned two of semiconductor chips so that an alloy is formed for the contacted portion, that is the head portion, of the aforementioned bump electrodes; then the aforementioned smooth

substrate is peeled off; after which, the aforementioned semiconductor chips are set facing each other and bonded to each other; furthermore, the peripheral portion is fixed by means of an adhesive.

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